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# The impact of AI development on professional contacts in mental health area

### Wpływ rozwoju SI na kontakty specjalistyczne w strefie zdrowia psychicznego

**Abstract.** The development of new technologies in World 4.0 poses many challenges to society that humanity has never faced before. Psychological support services are not an exception. The development of AI offers new possibilities for dealing with patients and may even change the key principles of psychology practice in the future.

**Keywords:** therapy apps, chatbots, psychological services, artificial intelligence, online therapy

**Streszczenie.** Rozwój nowych technologii w świecie 4.0 stawia przed społeczeństwem wiele wyzwań, z którymi ludzkość nigdy wcześniej się nie mierzyła. Usługi związane z pomocą psychologiczną nie są tutaj wyjątkiem. Rozwój SI daje nowe możliwości w kontaktach z pacjentami a w przyszłości może nieść za sobą zmianę nawet kluczowych założeń pracy w gabinecie psychologicznym.

**Słowa kluczowe:** aplikacje terapeutyczne, *chatboty*, usługi psychologiczne, sztuczna inteligencja, terapia online

#### Introduction

The launch of *ChatGPT* on 30 November 2022 revolutionised the perception of artificial intelligence. What has previously been exclusive

to science fiction worlds has, in a small way, become reality. In addition to the aforementioned chatbot, many other tools of this type have been developed. Artificial intelligence nowadays makes it possible to generate graphics, videos or voices, among other things. Using it, we can improve a computer code, add a photo after typing in what we want to see or create footage of people using a sample of their photos and voice. This brings with it many opportunities but also risks. People can use AI to create graphics, but they can also misuse it to fabricate content that implicates someone in a crime or damages their reputation.

Narrowing these considerations to contacts with mental health specialists, we can also see that challenges arise because of our relatively short time with artificial intelligence that require legal and ethical solutions. This problem affects many spheres of our lives. Still, because working with another human being and their personality is specific, and we cannot write it into an algorithm, the possible incorporation of artificial intelligence into the work of psychologists, psychotherapists, and psychiatrists should be given special consideration.

#### **AI origins**

In 1949, computer scientist Edmund Callis Berkeley published a book, Giant Brains, or Machines That Think, which compares newer computer models to human brains. Just six years later, the term "artificial intelligence" was used for the first time at Dartmouth University.

The 1950s to the 1980s were a period of rapid development and the greatest creativity in AI work. Various programming languages, for example, were developed then and are still used today. However, there was little interest in its development, as the US government was reluctant to continue funding research in artificial intelligence. Nevertheless, Joseph Weizenbaum created the ELIZA chatbot at the MIT Artificial Intelligence Laboratory in 1966.

The American Association of Artificial Intelligence (now the Association for the Advancement of Artificial Intelligence – AAAI) was founded in 1979. The first AAAI conference was held a year later at Stanford University. The same year, the Japanese government allocated \$850 million to the Fifth Generation Computer Systems project. They

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aimed to create devices that could converse in human language and exhibit reasoning like humans. The late 1980s saw a "winter of AI" due to low consumer interest. Nevertheless, the 1990s and 2000s produced much AI research: Windows introduced speech recognition software, the first robot to simulate human emotions was developed, the first Roomba was launched, and NASA sent two rovers to Mars. Also worth mentioning is the use of AI in advertising algorithms by Facebook, Twitter, and Netflix. Of course, one cannot forget Siri, the first virtual assistant developed by Apple in 2011.

In 2015, Elon Musk and Stephen Hawking, among others, sent an open letter to governments to call for a ban on developing offensive autonomous weapons. A year later, the humanoid Sophia, the first robot citizen, was created. However, ChatGPT has proved to be a revolutionary tool. It was made available to the public in 2023, but in 2020, Open AI started testing a beta version of GPT-3. Thus, a new challenge arises for humanity: how do we make good use of the opportunities and tools given to us so that we do not harm ourselves?

#### Overview of selected online and AI therapy tools

A tool originating from Poland is software that is available as an app or a website called ZnanyLekarz.pl. It enables online appointments, medical and psychotherapeutic consultations, and communication with specialists.

Another website is Trzymsie.pl. This platform brings together 70 cognitive behavioural therapists in one place. In addition, it offers online self-help courses (for people struggling with various mental health issues) created by professionals who collaborate with the website.

EUPHIRE is a Polish training platform that offers different psychology courses taught by specialists in their respective fields. In addition, the website offers individual meetings, supporting goals ranging from therapy to consulting. You can also find a database of free psychological knowledge through articles and videos.

Replika is one of the latest AI innovations in the market. The latest app updates made it possible to create your own VR "friend", "partner" or "psychotherapist". The company even advertises that its chatbot can alleviate loneliness by helping users build an emotional bond with their avatars. The AI also learns writing styles in order to mimic users.

Woebot is an intelligent chatbot designed to help users with mental health issues. Its creators particularly tout its effectiveness in helping people with depression and anxiety. Woebot's algorithm uses CBT techniques.

Sentiment is the last tool I want to mention. It is a platform that deals with emotions in a broad sense. Its offer includes creating an empathetic chatbot. By using real-time emotion analysis, the virtual assistant can match its messages to the feelings of the person it is chatting with.

## Risks and advantages of using AI in psychotherapy

Using chatbots for psychological support entails potential benefits as well as risks. Currently, the most serious threats seem to be data protection and user privacy. Individuals in need of psychological support can share, either with a chatbot or a platform providing services, very intimate data, e.g. describe their current mental status or their past in detail. The storage, security, and potential further processing and use of this data urgently need to be regulated to prevent misuse and ensure the best possible security for users. New legislation should take into account both the use of data and the criteria that an app or platform should meet to be a reliable source of assistance (Bendig et al., 2019).

Another risk is the blurring of the boundary between human and chatbot assistance. Research on the anthropomorphisation of technology shows that users are quick to assign technical systems human-like characteristics (Cristea et al., 2013). Hence, it would be advisable to examine whether this risks the user sharing something beyond the chatbot's capabilities.

Nevertheless, chatbots could be an opportunity to develop the offer of psychologists and psychotherapists. At this point, the most important consideration seems to be the potential to support people who cannot use professional assistance due to various barriers (e.g. financial reasons) (Stieger et al., 2018). Chatbots could also be used

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as "first aid" and support for patients waiting for an appointment with a specialist.

The use of chatbots could also support psychotherapy. This could be done through more extensive and in-depth psychological education of patients under the care of a specialist, enabling the psychotherapist to focus on the more difficult aspects of working with the patient that cannot be guided by AI. Additionally, in cognitive behavioural therapy, a *chatbot* could assist the patient with homework assignments set by the therapist (Feijt et al., 2018).

It is also worth mentioning that some of the work done by psychologists has been automated. Computer software is already being used to score questionnaires and describe the results obtained, and studies using virtual diagnosticians have, in turn, shown that artificial intelligence has performed better than the traditional interviewer in diagnosing symptoms of post-traumatic stress disorder. This shows that in the future, artificial intelligence algorithms can help to speed up or even automate the process of making a psychological diagnosis (Lucas et al., 2017).

#### Conclusion

Artificial intelligence in psychological support is both an opportunity for growth in the industry and a potential catalyst for threats. The most important fact is that artificial intelligence alone is not yet capable of providing professional psychological support. Nevertheless, it seems that *chatbots* can complement the work of professionals, especially in cognitive behavioural therapy. The bots mentioned here could be both a source of help and a source of danger, which is why legislation is needed to regulate therapeutic applications on the market, especially those based on artificial intelligence, such as *ChatGPT*. They use algorithms to generate content that often harms instead of helping. Currently, most European countries have no laws regulating the use of artificial intelligence in psychological support.

We are facing a major breakthrough in the context of providing psychological help and support. It is important to ensure that changes related to artificial intelligence are not introduced abruptly by way of revolution rather than by way of thoughtful implications based on specific and precise legal provisions. Artificial intelligence can help professionals, but they will be responsible for interacting with the patient because, at the moment, no bot will have access to the full picture of another human being and will not guarantee a personalised approach in the therapeutic process.

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